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EXAMINER
JUNTIMA, NITTAYA

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ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/030,356	KOISTINEN, TOMMI
	Examiner	Art Unit	
	Nittaya Juntima	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*14 February 2002*</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
      closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.
      4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-2,4-15,17,19-29* is/are rejected.
7)☒ Claim(s) *3 and 16* is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *14 February 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.
      Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
      Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
      a)☒ All   b)☐ Some * c)☐ None of:
        1.☒ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
            application from the International Bureau (PCT Rule 17.2(a)).
      * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____ .
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)   5) ☐ Notice of Informal Patent Application (PTO-152)
      Paper No(s)/Mail Date *1/7/02,11/24/03,5/22/05, 8/19/05, 9/14/05, 10/11/05*   6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 550 and 511 in Fig. 5.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities:

- on page 11, line 13, "303" should be changed to "304, " see Fig. 3;

- on page 12, line 28, "302" should be changed to "303," see Fig. 4;

- on page 13, line 8, "303" should be changed to "304," see Fig. 3.

Appropriate correction is required.

Claim Objections

3.   Claims 4, 5, 6, 10, 11, 12, 13, 15, 18, 19, 21, 23, 24, and 27 are objected to because of the

following informalities:

-      in claim 4, line 3, "the current" should be changed to "a current;"

-      in claim 5, line 3, "the data" should be changed to "a data;"

-      in claim 6, line 2, "on" should be inserted following "cellular network;"

-      in claim 10, line 1, "on" should be inserted following "instructions;"

-      in claim 11, line 1, "the" should be removed;

-      in claim 12, line 2, "RTCP" should be spelled out as "Real-time Transport Control

Protocol" to avoid any misinterpretation;

-      in claim 13, line 2, "RTP" should be spelled out as "Real-time Transport Protocol" to

avoid any misinterpretation;

-      in claim 15, line 2, "which comprises" should be changed to "comprising: ";

                lines 5-6, "characterized in that it further comprises" should be removed;

-      in claim 18, line 2, "which gateway comprises" should be changed to "comprising :";

                line 4, "the said" should be changed to "said;"

                lines 5-6, "characterized in that it further comprises" should be removed;

                line 18, "the" before "decoding" should be removed;

-      in claim 19, lines 1-2, "characterized in that – it comprises" should be changed to

"comprising: " to put the claims in a better form;

                line 13, "the" before "decoding" should be removed;

- in claim 21, line 2, "comprise" should be changed to "comprises;"

- in claim 23, lines 1-2, "characterized in that – it further comprises" should be changed to "comprising: " to put the claims in a better form;

line 13, "the" before "decoding" should be removed;

- in claims 19 and 23, line 4, "comprise" should be changed to "comprises;"

lines 9 and 10, "its" should be changed to "another" since decoding information is sent to the other side of the packet to enable the other side of the packet to use coding that corresponds to the decoding information transmitted, see also claim 1 (the current limitation is not supported by the specification);

line 13, "another" should be changed to "cellular network," see also claim 1;

- in claim 24, line 3-4, "over the packet network" should be removed as means 603 in Fig. 3 establishes information about decoder used in the cellular network, not a connection over the packet network, see specification on page 17, lines 9-17 and claim 20;

- in claim 27, line 2, "UMTS" should be spelled out as "Universal Mobile Telecommunications System" to avoid any misinterpretation.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22, 25, 26, 28, and 29

are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art

(Background of the Invention section of the specification) in view of Navaro et al. ("Navaro")

(USPN 6,108, 560).

Regarding claims 1, 4, 7, 8, and 28, the admitted prior art teaches a cellular network (201

in Fig. 2) comprising a tandem free operation capable coding-decoding unit (TRAU1 103 in Fig.

2) is connected to a packet network (IP 203 in Fig. 2), an entity comprising a terminal (TRAUS2

107 in Fig. 2) is connected to the packet network and data is transmitted over the packet network

between said coding-decoding unit on a first side of the packet network and said entity on a

second side of the packet network (a call/TFO frames between two TRAUs must be relayed over

a packet network when TFO is implemented and the TFO capable gateways are used, page 4,

lines 22-30 of the specification).

However, the admitted prior art does not teach transmitting information about the

decoding capabilities, tandem free operation capabilities, a current decoding method used in the

cellular network on the first side of the packet network over the packet network to the second

side of the packet network for enabling on the second side of the packet network transmission of

data frames to the packet network such that the data frames received from the entity are carrying

coded data and signaling information relating to tandem free operation and the coding of the

coded data corresponding to the decoding capabilities on the first side.

In an analogous art where tandem free operation, TFO, is implemented between two

cellular networks over a PSTN as shown in Fig. 2, Navaro teaches transmitting information

about the decoding capabilities and tandem free operation capabilities (the speech codec

currently in use and other possible codecs that can be used and TFO support notification sent in

TFO_REQ message, col. 17, lines 45-48), and a current decoding method used in the cellular

network (TFO frames indicating codec type, col. 6, lines 11-15, 18-22, 24-27, 37-42) on the first

side of a PSTN over the PSTN to the second side of the PSTN for enabling on the second side of

the packet network transmission of data frames (TFO frames, col. 6, lines 11-35) to the PSTN

such that the data frames received from an entity (TRAU, col. 5, lines 41-52) are carrying coded

data and signaling information relating to tandem free operation and the coding of the coded data

corresponding to the decoding capabilities on the first side (the speech codec currently in use and

other possible codecs that can be used and TFO support notification are sent using TFO_REQ

message from a BSS to the peer BSS to implement TFO where the same speech codec is used on

both sides, col. 8, lines 5-10 and col. 17, lines 42-55).

Given the teaching of Navaro on transmitting information about the decoding capabilities

and tandem free operation capabilities from one side of a network to another to ensure codec

compatibility, it would have been obvious to one skilled in the art at the time the invention was

made to modify the teaching of the admitted prior art by applying the teaching of Navaro such

that the step of transmitting information about the decoding capabilities and tandem free

operation capabilities, and a current decoding method used in the cellular network on the first

side of the packet network over the packet network to the second side of the packet network for

enabling on the second side of the packet network transmission of data frames to the packet

network such that the data frames received from the entity are carrying coded data and signaling

information relating to tandem free operation, and the coding of the coded data corresponding to

the decoding capabilities on the first side would be included as recited in the claim. The

suggestion/motivation to do so would have been to enable TFO mode when the same version of

codec is used on both sides, i.e. both BSS, as taught by Navaro (col. 17, lines 42-44).

Regarding claim 2, the admitted prior art fails to teach that information about the

decoding capabilities and tandem free operation capabilities on the second side of the packet

network is transmitted to the first side of the packet network.

In an analogous art where tandem free operation, TFO, is implemented between two

cellular networks over a PSTN as shown in Fig. 2, Navaro teaches that information about the

decoding capabilities and tandem free operation capabilities on the second side of the PSTN

network is transmitted to the first side of the PSTN (the peer BSS also transmits TFO request

message, col. 17, lines 42-55).

Therefore, it would have been obvious to one skilled in the art at the time the invention

was made to modify the teaching of the admitted prior art by applying the teaching of Navaro on

transmitting the information from the second side to the first side of a network such that

information about the decoding capabilities and tandem free operation capabilities on the second

side of the packet network is transmitted to the first side of the packet network would be

included as recited in the claim. The suggestion/motivation to do so would have been to enable

TFO mode when the same version of codec is used on both sides of the network, i.e. both BSS,

and to start a modification procedure when different codecs are used as taught by Navaro (col.

17, lines 42-44, 48-59).

Regarding claims 5 and 6, the admitted prior art fails to teach that information about the current decoding method is inferred from the tandem free operation frames that are comprised in a data flow that comes towards the packet network.

However, in an analogous art where tandem free operation, TFO, is implemented between two cellular networks over a PSTN as shown in Fig. 2, Navaro teaches that information about the current decoding method is inferred from the tandem free operation frames (TFO frames indicating codec type, col. 6, lines 11-15, 18-22, 24-27, 37-42) that are comprised in a data flow that comes towards a PSTN network.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of the admitted prior art by applying the teaching of Navaro on transmitting the information about the current decoding method in TFO frames from the second side to the first side of a network such that information about the current decoding method is inferred from the tandem free operation frames that are comprised in a data flow that comes towards the packet network. The suggestion/motivation to do so would have been to enable a TRAU to monitor whether the peer TRAU still operates in TFO mode as taught by Navaro (col. 6, lines 37-42).

Regarding claim 9, as shown in Fig. 2, the admitted prior art teaches that the entity is a cellular network (TRAU2 107 is part of a cellular network 202, see also page 4, lines 22-30 of the specification).

However, the admitted prior does not explicitly teach that the coding and decoding capabilities of each cellular network is transmitted to the other cellular network and the coding

and decoding methods used in a certain connection are negotiated between the cellular networks

when the connection is established.

In an analogous art where tandem free operation, TFO, is implemented between two

cellular networks over a PSTN as shown in Fig. 2, Navaro teaches that the coding and decoding

capabilities (other possible codes that can be used) of each cellular network (BSS) is transmitted

to the other cellular network (peer BSS) and the coding and decoding methods used in a certain

connection (the same codec) are negotiated between the cellular networks when the connection is

established (col. 17, lines 45-59).

Therefore, it would have been obvious to one skilled in the art at the time the invention

was made to modify the teaching of the admitted prior art by applying the teaching of Navaro on

transmitting the coding and decoding capabilities and negotiating the coding and decoding

methods such that the coding and decoding capabilities of each cellular network is transmitted to

the other cellular network and the coding and decoding methods used in a certain connection are

negotiated between the cellular networks when the connection is established would be included

as recited in the claim. The suggestion/motivation to do so would have been to enable TFO

mode when the same version of codec is used on both sides of the network, i.e. both BSS, and to

start a modification procedure when different codecs are used as taught by Navaro (col. 17, lines

42-44, 48-59).

Regarding claim 10, as shown in Fig. 2, the admitted prior art teaches each cellular

network (201 and 202) and the packet network (IP 203), but fails tot each that instructions how

to transmit the data flow coming from each cellular network are transmitted from the cellular

networks towards the packet network.

In an analogous art where tandem free operation, TFO, is implemented between two

cellular networks over a PSTN as shown in Fig. 2, Navaro teaches instructions (TFO_ACK

indicating the current speech codec in use and a random value that allows the detection of loop

backs of a given BSS) on how to transmit the data flow coming from each cellular network (each

BSS) are transmitted from the cellular networks towards the PSTN (col. 16, lines 37-46 and col.

17, lines 61-65).

Therefore, it would have been obvious to one skilled in the art at the time the invention

was made to modify the teaching of the admitted prior art by applying the teaching of Navaro on

transmitting the instructions on how to transmit the data flow from each the cellular networks

such that instructions how to transmit the data flow coming from each cellular network are

transmitted from the cellular networks towards the packet network would be included as recited

in the claim. The suggestion/motivation to do so would have been to enable both cellular

networks to use the same codec for TFO implementation as taught by Navaro (col. 17, lines 63-

65).

Regarding claims 11, 12, and 13, the combined teaching of the admitted prior art and

Navaro fails to explicitly teach that calls are transmitted over the packet network using a certain

protocol defined for real time applications and information about the decoding capabilities and

tandem free operation capabilities on the first side of the packet network are transmitted to the

second side of the packet network using a certain control protocol for real time applications

including RTP or RTCP messages. However, the admitted prior art further teaches that the

H.323 specification has been created by the ITU for defining a standard framework for audio,

video, and data communications over packet networks (page 3, lines 22-27 of the specification).

An official notice is taken that it is well known that RTP/RTCP is the H.323 based

transport protocol used for the transportation of voice packets. Specifically, it is well known in

the art that RTP (a certain protocol defined for real time applications) is used for transporting

calls or voice packets over packet network such as Internet and RTCP (a certain control

protocol for real time applications) is used for providing voice parameters and as a means to

determine various transmission characteristics of a packet network.

Therefore, it would have been obvious to one skilled in the art at the time the invention

was made to have included a certain protocol defined for real time applications, i.e. the RTP,

and a certain control protocol for real time applications, i.e. the RTCP, such that the calls would

be transmitted over the packet network using RTP messages and the information about the

decoding capabilities and tandem free operation capabilities would be transmitted over the

packet network using RTP or RTCP messages. The suggestion/motivation to do so would have

been to utilize the transport protocols that are already available as defined in the H.323

specification to transport voice and voice related parameters over packet network.

Regarding claim 14, the combined teaching of the admitted prior art and Navaro does not

explicitly teach that information about the decoding capabilities and tandem free operation

capabilities is transmitted in H.245 signaling messages. However, the admitted prior art further

teaches that the H.323 specification has been created by the ITU for defining a standard

framework for audio, video, and data communications over packet networks (page 3, lines 22-27

of the specification).

An official notice is taken that it is well know in the art that H.245 signaling messages are

used to establish call connection, and capability information between two endpoints as defined

in H.323 specification.

Therefore, it would have been obvious to one skilled in the art at the time the invention

was made to have included H.245 signaling messages such that information about the decoding

capabilities and tandem free operation capabilities is transmitted in H.245 signaling messages as

recited in the claim. The suggestion/motivation to do so would have been to utilize the already

available H.245 signaling messages to establish capability information between two endpoints

over the packet network as defined in H.323 specification.

Claim 15 is a decoding information exchange arrangement claim corresponding to the

method claim 1 and is rejected under the same reason set forth in the rejection of claim 1 wherein

means for establishing tandem free operation information and means for establishing decoding

information about decoders on its side read on a BSS of Navaro (Navaro, BSS must establish

TFO information and decoding information prior to transmitting TFO_REQ containing TFO

support notification and a list of other possible codecs that can be used to a peer BSS, col. 17,

lines 45-48, 51-59), means for communicating data structures over the packet network reads on

tandem free operation capable gateways in the admitted prior art (page 4, lines 28-30 of the

specification), means for establishing a data structure that comprises the tandem free operation

information and at least a certain part of the decoding information read on an inherent element

in BSS of Navaro that generates TFO_REQ message (Navaro, col. 17, lines 45-48), and means

for receiving information about tandem free operation capability and decoding information on

another side of the network for enabling the transmission of data frames, when such data frames

are received from its side of the network, said data frame carrying coded data and signaling

information relating to tandem free operation, and the coding of the coded data in the data frame

corresponding to the decoding capabilities on said another side, reads on an inherent element in

BSS of Navaro that receives TFO_ACK message (col. 17, lines 45-65).

Claim 17 is a decoding information exchange arrangement claim corresponding to the

method claim 10 and is rejected under the same reason set forth in the rejection of claim 10

wherein means for receiving instructions about the processing of tandem free operation frames

reads on an inherent element in BSS that receives TFO_ACK message from a peer BSS (col. 16,

lines 36-46 and col. 17, lines 59-65).

Claims 19 and 20 are decoding information transmission arrangement (BSS of Navaro)

claims and claims 23 and 24 are cellular network element (BSS of Navaro) claims that contain

limitations similar to that of claim 15 and are therefore rejected under the same reason set forth

in the rejection of claim 15, where in claims 20 and 24 the means for establishing information

about a decoder used in a certain connection reads on an inherent means in the BSS of Navaro

(Navaro, an inherent means in the BSS must establish information about a decoder in use prior to

transmitting the TFO_REQ to the peer BSS, col. 17, lines 45-48, 51-59).

Claims 21 and 22 are arrangement claims corresponding to method claims 9 and 10,

respectively, and are rejected under the same reason set forth in the rejection of claims 9 and 10,

respectively.

Claims 25 and 26 are cellular network element claim corresponding to method claims 9

and 10, respectively, and are rejected under the same reason set forth in the rejection of claims 9

and 10, respectively.

Regarding claim 29, as shown in Fig. 2, the admitted prior art teaches that the cellular

network (201) is connected to the packet network (IP 203) with a first gateway (204) and said

entity (TRAUs 107) is connected to the packet network with a second gateway (205). Further,

the admitted prior art teaches that TFO frames can be relayed between the two gateways (page

4, lines 22-30). However, the admitted prior art does not teach that said information is

transmitted from the first gateway to the second gateway.

In an analogous art where tandem free operation, TFO, is implemented between two

cellular networks over a PSTN as shown in Fig. 2, Navaro teaches transmitting information

(said information) about the decoding capabilities and tandem free operation capabilities (the

speech codec currently in use and other possible codecs that can be used and TFO support

notification sent in TFO_REQ message, col. 17, lines 45-48) from one cellular network to

another.

Given the teaching of Navaro on transmitting information about the decoding capabilities

and tandem free operation capabilities from one side of a network to another to ensure codec

compatibility, it would have been obvious to one skilled in the art at the time the invention was

made to modify the teaching of the admitted prior art by applying the teaching of Navaro such

that said information would be transmitted from the first gateway to the second gateway as

recited in the claim. The suggestion/motivation to do so would have been to enable TFO mode

when the same version of codec is used on both sides of the cellular networks as taught by

Navaro (col. 17, lines 42-44).

6.   Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior

art (Background of the Invention section of the specification) in view of Navaro et al.

("Navaro") (USPN 6,108, 560), and further in view of Bergenwall et al. ("Bergenwall") (USPN 6,292,891 B1).

Regarding claim 27, although Navaro teaches that the network element is a BSS which is an element in a GSM network, the combined teaching of the admitted prior art and Navaro fails to each that the network element is a network element of an UMTS network.

However, Bergenwall teaches that same leading principles and components used in GSM network can be modified to use in and applied to next generation networks such as UMTS and IMT-2000 (col. 6, lines 36-45).

Given the teaching of Bergenwall, it would have been obvious to one skilled in the art at the time the invention was made to modify the combined teaching of the admitted prior art and Navaro to include UMTS network such that the claimed network element would be a network element of an UMTS network. The suggestion/motivation to do so would have been to apply the same leading principles used in GSM network to UMTS network as taught by Bergenwall (col. 6, lines 36-45).

Allowable Subject Matter

7.   Claims 3 and16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8.   Claim 18 is allowed. The prior art alone or in combination fail to teach or make obvious on the following when considered in combination with other limitations in the claim: a gateway that comprises means for receiving information about tandem free operation capability and

decoding information on another side of the second network for enabling to the packet network transmission of data frames, when such data frames are received from its side of the packet network, said data frames carrying coded data and signaling information relating to tandem free operation.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
March 30, 2006

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